

Amendments to the Claims

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1 – 25 (cancelled)

Claim 26 (currently amended): A method for supplying a pressurized gas by vaporization of a cryogenic liquid from at least two cryogenic separation units, at least one of said units comprising a heat exchanger and a system of columns, in which, in each separation unit,

- a) a compressed and purified gas mixture is cooled in the heat exchanger to produce a compressed, purified and cooled gas mixture,
- b) the compressed, purified and cooled gas mixture is separated in the system of columns,
- c) a cryogenic liquid is withdrawn from the system of columns, pressurized, and, in a first operating mode, a first portion of the pressurized cryogenic liquid is vaporized in the heat exchanger to supply a portion of the pressurized gas, and
- d) the pressurized gas is supplied from each unit,

and in which, according to the first operating mode:

- e) a second portion of the cryogenic liquids from each cryogenic separation unit is sent to a common storage facility, and
- f) cryogenic liquid from the storage facility is sent to each heat exchanger to be vaporized therein,

wherein, in case of shutdown of a cryogenic separation unit, of a second operating mode, the common storage facility supplies a common vaporizer, preferably after a pressurization step, in which the cryogenic liquid from the common storage facility is vaporized by heat exchange with a heating liquid to supply all or a portion of the pressurized gas.

Claim 27 (previously presented): The method of claim 26, in which the cryogenic liquid vaporized in the common vaporizer only comes from the common storage facility.

Claim 28 (cancelled)

Claim 29 (currently amended): A method for supplying a pressurized gas by vaporization of a cryogenic liquid from at least two cryogenic separation units, at least one of said units comprising a heat exchanger and a system of columns, in which, in each separation unit,

- a) a compressed and purified gas mixture is cooled in the heat exchanger to produce a compressed, purified and cooled gas mixture,
- b) the compressed, purified and cooled gas mixture is separated in the system of columns,
- c) a cryogenic liquid is withdrawn from the system of columns, pressurized, and, in a first operating mode, a first portion of the pressurized cryogenic liquid is vaporized in the heat exchanger to supply a portion of the pressurized gas, and
- d) the pressurized gas is supplied from each unit, ...

and in which, according to the first operating mode:

- e) a second portion of the cryogenic liquids from each cryogenic separation unit is sent to a common storage facility, and
- f) cryogenic liquid from the storage facility is sent to each heat exchanger to be vaporized therein,

in which the first portion of cryogenic liquid is pressurized by means of at least one pump and, of a third operating mode, in case of shutdown of at least one of the pumps of a cryogenic separation unit, in order to compensate for the loss of compressed liquid due to the shutdown of this pump, the second portion of the cryogenic liquid sent to the storage facility is increased compared with the flow when

the pump is running, and in the case in which one pump of the unit remains in working order, the flow rate of cryogenic liquid from the system of columns and sent to the heat exchanger of this cryogenic separation unit is increased in comparison with the flow rate when the pump is running.

Claim 30 (previously presented) : The method of claim 29, in which, in case of shutdown of at least one pump of a cryogenic separation unit, the first portion of the cryogenic liquid is increased in comparison with the flow when the pump is running for at least one other air separation unit of which the pump or pumps is/are running and the second portion of the cryogenic liquid sent to the storage facility is reduced in comparison with the flow when the pump is running for at least one other air separation unit of which the pump(s) is/are running.

Claim 31 (currently amended) : A method for supplying a pressurized gas by vaporization of a cryogenic liquid from at least two cryogenic separation units, at least one of said units comprising a heat exchanger and a system of columns, in which, in each separation unit,

- a) a compressed and purified gas mixture is cooled in the heat exchanger to produce a compressed, purified and cooled gas mixture,
- b) the compressed, purified and cooled gas mixture is separated in the system of columns,
- c) a cryogenic liquid is withdrawn from the system of columns, pressurized, and, in a first operating mode, a first portion of the pressurized cryogenic liquid is vaporized in the heat exchanger to supply a portion of the pressurized gas, and
- d) the pressurized gas is supplied from each unit,

and in which, according to the first operating mode:

- e) a second portion of the cryogenic liquids from each cryogenic separation unit is sent to a common storage facility, and

- f) cryogenic liquid from the storage facility is sent to each heat exchanger to be vaporized therein,

in which, in case of shutdown of a cryogenic separation unit, the second portion of the cryogenic liquid sent from at least one cryogenic separation unit to the storage facility is reduced in comparison with the flow rate when the unit is running, preferably to zero, the first portion of the cryogenic liquid sent to the heat exchanger is increased in comparison with the flow when the unit is running for at least one cryogenic separation unit remaining in operation.

Claim 32 (currently amended): A method for supplying a pressurized gas by vaporization of a cryogenic liquid from at least two cryogenic separation units, at least one of said units comprising a heat exchanger and a system of columns, in which, in each separation unit,

- a) a compressed and purified gas mixture is cooled in the heat exchanger to produce a compressed, purified and cooled gas mixture,
- b) the compressed, purified and cooled gas mixture is separated in the system of columns,
- c) a cryogenic liquid is withdrawn from the system of columns, pressurized, and, in a first operating mode, a first portion of the pressurized cryogenic liquid is vaporized in the heat exchanger to supply a portion of the pressurized gas, and
- d) the pressurized gas is supplied from each unit,

and in which, according to the first operating mode:

- e) a second portion of the cryogenic liquids from each cryogenic separation unit is sent to a common storage facility, and
- f) cryogenic liquid from the storage facility is sent to each heat exchanger to be vaporized therein,

in which, only in case of shutdown of at least one cryogenic separation unit, cryogenic liquid is sent from the storage facility to an emergency vaporizer.

Claims 33 – 37 (cancelled)

Claim 38 (previously presented): The installation of claim 31, comprising a common vaporizer, means for supplying the common vaporizer from the common storage facility, preferably pressurizing means downstream of the common storage facility and upstream of the common vaporizer and means for permitting heat exchange with a heating fluid and the cryogenic liquid in the vaporizer.

Claim 39 (currently amended): Installation for supplying a pressurized gas by vaporization of a cryogenic liquid from at least one cryogenic separation unit, each unit comprising a heat exchanger and a system of columns comprising, in each cryogenic separation unit:

- a) means for sending a compressed and purified gas mixture to the heat exchanger to produce a compressed, purified and cooled gas mixture;
- b) means for sending the compressed, purified and cooled gas mixture to the system of columns;
- c) means for withdrawing a cryogenic liquid from the system of columns, means for pressurizing the cryogenic liquid, and means for sending at least a first portion of the pressurized cryogenic liquid to the heat exchanger to supply a portion of the pressurized gas;

the installation further comprising a common storage facility and means for sending a second portion of the cryogenic liquid from the cryogenic separation units to the common storage facility, a common vaporizer and means for sending a portion of the cryogenic liquid from the cryogenic separation units to the common vaporizer, and means for sending cryogenic liquid from the storage facility to the heat exchanger of each cryogenic separation unit, comprising means for sending cryogenic liquid from the common storage facility to the heat exchanger of at least one cryogenic separation unit, comprising means for pressurizing the cryogenic liquid downstream of the common storage facility and upstream of the heat exchanger, in which the

same pressurizing means are connected downstream of the common storage facility and upstream of the common vaporizer and to at least one heat exchanger of a cryogenic separation unit.

Claim 40 (previously presented): The installation of claim 38, in which the cryogenic liquid vaporized in the common vaporizer is only obtained from the common storage facility.

Claims 41 – 42 (cancelled)

Claim 43 (previously presented): The installation of claim 39 further comprising a means for mixing the pressurized gas from at least two cryogenic separation units to supply the pressurized gas.